

Applicant : Carl G. Demarcken
Serial No. : 09/431,365
Filed : November 1, 1999
Page : 2 of 13

Attorney's Docket No.: 09765-021001

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A travel planning system comprising:
a requirements generator module to generate a plurality set of diverse travel requirements, the requirements generator module including a module to define the set of diverse travel requirements by establishing a plurality of travel requirement templates, and for each travel requirement template, defining a plurality of travel requirements, each of the travel requirements corresponding to a different value of the respective travel requirement template; and
a selection module to output a set of diverse travel options smaller than a candidate set of travel options by selecting from the candidate set of travel options, for each diverse travel requirement in the plurality set of diverse travel requirements, one or more travel options that satisfy that travel requirement[[],];
wherein the candidate set of travel options is represented using a data structure that compactly stores the candidate set of travel options.
2. (previously presented) The travel planning system of claim 1 wherein the data structure comprises a graph data structure.
3. (previously presented) The travel planning system of claim 1 further comprising a display to display the diverse set of travel options.
4. (previously presented) The travel planning system of claim 1 further comprising:

Applicant : Carl G. Demarcken
Serial No. : 09/431,365
Filed : November 1, 1999
Page : 3 of 13

Attorney's Docket No.: 09765-021001

a travel option generator module to generate a first ordered set of travel options using a first preference function and a second ordered set of travel options using a second preference function, and

wherein the selection module outputs a set of diverse travel options by selecting a first and second number of travel options from each of the first and second ordered set of travel options, respectively.

5. (canceled)

6. (previously presented) The travel planning system of claim 1 wherein at least one of the diverse travel requirements within the plurality is not a user entered travel requirement.

7. (previously presented) The travel planning system of claim 1 wherein the plurality of diverse travel requirements comprise at least one of travel on a particular carrier, non-stop travel, outbound travel departing in a predefined time period, return travel departing in a predefined time period, non-stop travel on a predefined airline, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date.

8. (previously presented) The travel planning system of claim 7 wherein the predefined time period comprises morning, afternoon, evening or a predefined date.

Claims 9-26. (cancelled)

27. (previously presented) The travel planning system of claim 1 wherein the compact data structure comprises a directed acyclic graph.

Applicant : Carl G. Demarcken
Serial No. : 09/431,365
Filed : November 1, 1999
Page : 4 of 13

Attorney's Docket No.: 09765-021001

28. (previously presented) The travel planning system of claim 1 wherein the compact data structure comprises a grammar.

Claims 29-51. (cancelled)

Claim 52. (previously presented) A method for generating a diverse set of travel options, the method comprising:

 determining a candidate set of travel options, the candidate set of travel options being based on user input and represented using a data structure that compactly stores the candidate set of travel options;

 defining a set of diversity requirements, with defining comprising:

 establishing a plurality of travel requirement templates, for each travel requirement template,

 defining a plurality of travel requirements, each of the travel requirements corresponding to a different value of the respective travel requirement template to produce the set of diversity requirements, and for each travel requirement in the set of diversity requirements,

 selecting from the candidate set of travel options a travel option that satisfies that travel requirement;

 combining the selected travel options for the travel requirements to generate the diverse set of travel options; and

 displaying the diverse set of travel options to a user.

Claim 53. (previously presented) The method of claim 52 wherein values for a particular travel requirement template are based on the candidate set of travel options.

Claim 54. (previously presented) The method of claim 52 wherein the plurality of travel requirement templates include particular carriers, number of stops, outbound travel

Applicant : Carl G. Demarcken
Serial No. : 09/431,365
Filed : November 1, 1999
Page : 5 f13

Attorney's Docket No.: 09765-021001

departing in a predefined time period, return travel departing in a predefined time period, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date.

Claim 55. (previously presented) The method of claim 54 wherein values for the travel requirement template of particular carriers with corresponding travel requirements including a first particular airline and a second, different particular airline.

Claim 56. (previously presented) An article of manufacture having computer-readable program portions embodied therein for generating a diverse set of travel options, the article comprising instructions for causing a processor to:

determine a candidate set of travel options, the candidate set of travel options being based on user input and represented using a data structure that compactly stores the candidate set of travel options;

define a set of diversity requirements with instructions to define comprising instructions to:

establish a plurality of travel requirement templates, for each travel requirement template,

define a plurality of travel requirements, each of the travel requirements corresponding to a different value of the respective travel requirement template to produce the set of diversity requirements, and for each travel requirement in the set of diversity requirements,

select from the candidate set of travel options a travel option that satisfies that travel requirement;

combine the selected travel options for the travel requirements to generate the diverse set of travel options; and

display the diverse set of travel options to a user.

Applicant : Carl G. Demarcken
Serial N . : 09/431,365
Filed : November 1, 1999
Page : 6 f 13

Attorney's Docket No.: 09765-021001

Claim 57. (previously presented) The article of claim 56 wherein values for a particular travel requirement template are based on the candidate set of travel options.

Claim 58. (previously presented) The article of claim 56 wherein the plurality of travel requirement templates include particular carriers, number of stops, outbound travel departing in a predefined time period, return travel departing in a predefined time period, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date.

Claim 59. (previously presented) The article of claim 58 wherein values for the travel requirement template of particular carriers with corresponding travel requirements include a first particular airline and a second, different particular airline.